
A Framework for Analyzing & Developing Theater-Specific Information Operations

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Editorial Abstract: This is the third part of the series studying the ways in which information and associated intelligence can play a role in helping formulate coherent IO that operates seamlessly from the strategic to the tactical levels. Part I explored the overall backdrop against which information operations make contributions to the ways in which we operate in 'complex theatres.' Part II introduced a framework whereby intelligence analysts could develop 'jigsaw puzzles' that would enable improved levels of situational awareness to be developed in these complex theatres. This part of the series takes the Jigsaw Puzzle Paradigm one step further, introducing a framework through which commanders can form situational awareness when operating against a backdrop such as a 'Three-Bloc War.'

Any analysis of contemporary military theatres, such as Iraq and Afghanistan [and results emerging from the 2006 conflict in Lebanon] will highlight the very dynamic and adaptable nature of the adversaries we face today. If Colonel John Boyd's Observe, Orient, Decide and Act (OODA) loop paradigm [Hammond, 2001] still applies to today's warfare, then the age old axiom that one needs to stay inside the adversary's OODA loop still guides our thinking.

This is complicated today by the pace at which military operations can be concluded in their high intensity phase, and situations where you may find yourself engaged in what is referred to as the 'Three Bloc War.' This is where you might still be fighting at one end of the operations spectrum in a very small geographic area, but also in parallel delivering humanitarian relief supplies to a nearby part of a community. This is also increasingly difficult when one is faced by an enemy who has so clearly shown adaptability, flexibility and ability to use the cognitive space—such as the use of so-called 'night letters' in theatre to intimidate key members of the population—a form of tactical information operation.

Thus, it is relatively straightforward to say our need to dictate military operations tempo when fighting a conventional high intensity operation—such as the initial stages of Operation Iraqi Freedom or on-going large-scale operations in Afghanistan—by staying inside the adversaries' decision cycle, is vital. It throws the adversary onto the back foot, and allows you to dominate

the tempo at which operations are carried out—in effect you and not the adversary have the initiative. A question is: does this concept still apply when one is dealing not with the 20 days war, but the 20 year war—addressing counter-terrorism and counter-insurgency?

The first point is that we might think there is a huge difference in the tempo of operations conducted in the 20 day war as opposed to the 20 year war. As a statement this is not necessarily true. Some aspects of information operations have to be thought of as very long-term, almost generational in scope. These are not all strategic information operations, as there will be a need for on-going and adaptable IO at the operational and tactical levels. We must be responsive to local initiatives taken by the enemy to reduce the impact of our on-going activities.

Other strategic level activities may only last for short periods of time, requiring adjustment in response to an adversary's actions. This all points to the need to develop much greater agility in the planning and conduct of information operations—driving a clear need for information and associated intelligence to be synchronised with the same. The question becomes how do we move towards this situation, creating the circumstances where such responsive and agile capabilities are available?

Information and Intelligence Perspectives

In the second part of this series (*IO Sphere*, Spring 2007: 19) we discussed

the idea of information landscapes that allowed us to collect material across the whole spectrum of the information space—from economic and political to classic military and physical aspects of warfare. These landscapes provide a framework in which an intelligence analyst supporting IO development could piece together 'jigsaw puzzle' pictures, that commanders could use to make decisions.

The jigsaw puzzles provide the coherent images from which commanders can evaluate different courses of action (COA), and try to look into the future to predict likely outcomes associated with each COA. The issue is the degree to which we can put together such pictures with the right levels of certainty, recognizing what has been called the four dimensions of ignorance [Zack, 1999]: uncertainty, ambiguity, complexity and equivocality. All of these pervade the intelligence analysis process and hence effect the assessment that arises.

Clearly, in today's theaters of operation the pictures formed from doing these puzzles are highly dynamic and subject to rapid and sometimes unpredictable change. After all, we face an agile adversary who can change his tactics at will, as he feels far less constrained by the approach to warfare he conducts. Our adversaries feel all options are on the table—including Weapons of Mass Destruction—and can be justified.

One of the advantages of asymmetrical approaches to warfare is to hit hard at what you perceive to be your enemies' center of gravity [Thome,

2006], such as his economy. Or, you might reach out through the media to populations who might influence and weaken a politician's resolve. The adversaries' objectives and approach can vary quickly, making excellent use of maneuver warfare in the cognitive domain as part of their own conduct of IO [Thomas, 2006]. We have seen examples in Iraq where the emphasis on attacks by suicide bombers has changed several times, from coalition forces through to the internal security organizations, and even to government officials.

It is clear to most commentators that in these theaters our adversary seeks to create a high degree of disorder or entropy—in effect denying a civilian population what they seek most: security against which to plan their futures. Our adversaries aim to promote situations that encourage civil war and the break down of society. While this may be their short-term aim, it is difficult to imagine their long-term aim—though clearly not the form of stable society we would understand. A crucial point from the situational awareness perspective is that our adversaries may not have a specific outcome in mind, other than removal of foreign forces from their land... what comes after that is left alone. In this situation some actions are not easy to predict, as they do not form part of what we might consider a coherent campaign to achieve specific objectives.

While these contemporary situations are complex and difficult to predict, it is also clear that in trying to develop new approaches to information operations, any framework must also cater for situations not based upon, for example, detailed ethno-religious situations. It is important to highlight that more straightforward application of military power, such as destroying an enemy's military capability, still requires supportive IO across the spectrum of operations.

Military operations since the Second World War that have embraced a wide range of activities, from humanitarian relief through varying forms of peace

keeping and peace enforcement. Any framework must be agile enough to recognize the form of the mission assigned to the military, and the likely ranges of options they will use in undertaking this task. This acknowledges that while the world is complicated, and not helped by the ubiquitous nature of the media, not all military operations will be carried out in complex theaters. So how do we recognise different types of theaters and adjust our approaches accordingly?

A Framework for Developing Situational Awareness

One of today's maxims is that by developing and deploying Network Centric Warfare (NCW) capabilities we will create the circumstances in which we can use our Intelligence, Surveillance, Target Acquisition, and Reconnaissance (ISTAR) assets to gain an almost perfect



Developing situational awareness. (Defense Link)

picture of the enemy's deployments and intentions. This, the idea goes, creates the situation whereby we create what we shall refer to as enhanced situational awareness—by definition that we have better means of collecting material—and then can act having gained information superiority and hence decision supremacy. While this sounds great in theory, in practice things are a little more complicated, especially when trying to develop a coherent view of an information campaign across the strategic to the tactical levels.

For a commander to develop situational awareness, let alone an

enhanced SA variant, we have to be capable of mapping his evolving mental images to what we are developing from intelligence and other information sources. He will represent things in his mind as pieces of puzzles built from things that are easily memorized, sometimes using pictorial metaphors to represent images that can be recalled when required. This is the point where a commander moves from *awareness* to *understanding* [Ntuen, 2005], in effect applying his own internal models to represent the situation. In creating understanding a commander has to consider if he has seen this sort of situation before, what was previously relevant, and what has application here and now?

In his seminal work *Sources of Power*, Klein has analyzed a wide range of decision making environments, such as those undertaken by fire fighters [Klein, 1999]. He developed the Recognition Primed Decision model [RPD], which shows how quickly commanders in some situations can develop a COA from relatively uncertain information. In military situations such as high intensity, rapid tempo conflicts, the application of this model may well reflect the levels of training and experience that give commanders the ability to use their tacit knowledge to immediate effect. However, in counterinsurgency and counterterrorism operations this reliance upon the intuitive aspects of decision making might be too simplistic. It is vital that the commander appreciates the nature of the backdrop against which he is tasked, setting the context for any operational planning carried out as part of on-going stabilization efforts.

In looking across a large number of military operations carried out in the 20th century and those that are currently on-going in the 21st, we can characterise the backdrop against which they were conducted into one of four definitions:

- Recognized: where knowledge of the enemies' ORBAT, and associated



*A US soldier reflects on a sometimes anarchic campaign.
(Defense Link)*

intelligence on his tactical deployments and approach to warfare was so well understood that the campaign plan could be created with a reasonable degree of certainty. While still needing to be adaptable to the fog of war, the ability to reason the likely outcomes of specific actions—the cause and effect relationships—were quite well understood. Examples of this include: the Battle of Alamein; the Falklands War [Woodward, 2003]; Gulf War I; initial operations in Iraq in 2003 [Clark, 2003]; and Afghanistan in 2001.

- **Complex:** where it is possible to develop an understanding of the enemy's activities, but requiring additional intelligence collection effort, such as collecting HUMINT. With little understanding and predictability of the adversary's behavioral reaction—because the underlying cause and effect relationships are not immediately clear—it is difficult for a commander to consider the ramifications of his actions [Smith, 2005]. A specific example is the Kosovo War, and the way in which Slobodan Milosevic's behavior and actions were difficult to predict, requiring some intensive socio-cultural understanding about the history of Kosovo and its significant place in Serbian politics. This characterization also applies in some areas of Afghanistan today.

- **Chaotic:** where outcomes of a commander's specific actions can be realistically seen only in retrospect, and are difficult to see being repeated. There are discernible aggregated patterns of

behavior, but it is difficult to predict how various communities within a population may react to specific military undertakings. In this situation, cause and effect relationships at the heart of command decision making are very difficult to predict. One moves to a world where we must manage unexpected outcomes flexibly. Examples of this exist today in areas of Iraq such as Basra, and in some areas of Afghanistan.

- **Anarchic:** where there are next to no discernible patterns of behavior on which a commander can gain any decision-making traction, in terms of creating effects. This lack of patterns of behavior being indicative of the lack of cohesion of enemy elements—too many different factions each pulling their own way and not having any common view or goal. Without that common goal, each faction is essentially fighting their own battles—even though they may have a very limited understanding of any end-state they are trying to achieve. Hence, we lack discernible patterns in factional behavior. In this situation it is vital to try and narrow, or shape, some of the freedom given to the various factions and get their behavior onto a more predictable footing. Examples of this state exist today in areas of Iraq such as the Sunni Triangle.

The aim of creating these four states of understanding is to show the ways commanders form situational awareness has to be set against the varying levels of entropy (disorder). It also shows commanders what they need to reflect upon when setting their local operational focus, as they move toward overall campaign goals such as stabilizing a country. Responses developed against an anarchic backdrop will be very different from those taken in a more

mature theater, such as in Bosnia today. There the cause and effect relationships are easier to predict, as the behaviors of key players and stakeholders is more certain.

A Framework of Analysis

To create military effects it is important for commanders to appreciate that entropy exists not only in a theater, but at the regional and local levels. In Afghanistan for example, one valley might be quite separate from another due to the geography of the Hindu Kush, requiring quite different levels of activity from a security standpoint.

Today it is fair to say the in-theater entropy across Iraq and Afghanistan—in terms of socio-cultural relationships, ethno-religious factors, economic and political issues—varies greatly from region to region. We must create information operations to address these wide variances, hence the desirability of what we shall refer to as a Framework of Analysis. This provides a structured way of looking at first, second and third order effects we must consider when developing information operations and related military activities—such as mounting arrests of key people, disrupting illegal activities, shutting down local law enforcement agencies—against which they have to sit. The issue with many of these groups is what we shall refer to as 'tightly coupled communities'—where activities undertaken against one person or group can have far reaching consequences across a community.

This Framework of Analysis has several dimensions, which need to be handled with care, for it is possible to create additional complexity. We must strike a balance between having the right dimensions, with appropriate representation of effects, where interactions are at play between those dimensions. In other words, the framework needs to provide a campaign assessment capability where we can represent cause and effect relationships and study their impact. Further, this requires development of models able to show those interactions, in order to study variations on approaches.

The dimensions will include, but not necessarily need to represent the total of:

- Political analysis and historical perspectives, where these are relevant
- Demographics and geographic allegiances
- Socio-cultural relationships, including long-term antipathies where these exist between families and tribal groups
- Economic analysis, and associated overtures, such as the development of natural resources
- Criminal identities and group links
- Moral values & Legitimacy

The Framework of Analysis allows users, e.g. intelligence analysts, to determine what kinds of information they need to collect, from a first and second order perspective. This will allow them to build the pictures required to play into the analysis processes, where ‘what if’ activities and cause and effect relationships are studied. We need to develop this framework from a number of viewpoints, including family, tribal, local and regional communities’ perspectives, plus the population at large. From this, operations and planning staff can start to build options for short and longer-term operations against varying levels of entropy or disorder within a given community or local area.

The aim is to create or shape the circumstances through various tactical operations, and set against an operational backdrop, to move an area or community from higher levels of entropy (such as those deemed to be anarchic) to a lower level of disorder. In effect, we are trying to move a community from the anarchic end of the scale, through a series of activities in a campaign, to lower levels where we more readily understand the cause and effect relationships—and the behavior is more predictable. Equally vital, planners must consider the situation where one wishes to avoid carrying out operations that result in a situation worsening. Certainly we do not want to move from a relatively controlled and yet complex situation into a chaotic one, through our military actions.

Core to this is getting sufficient when developing the representation of the key players in-theater, to enable some form of predictive analysis upon their behavior—if necessary with support from people with specific skills such as social psychology. Collecting enough information and associated intelligence material allows some degree of predictive behavioral modelling, playing out scenarios to see what might happen if we adopt a specific COA.

Clearly, given our definition above, the analysis framework will vary from the recognized backdrop to the anarchic context. In the first case the emphasis will be upon collecting



Coalition officer calls attention to the operations plan. (Defense Link)

information and intelligence material at sufficient levels of granularity to allow predictive modelling. In this case we must develop very detailed models of the social ties of individuals and groups from whatever sources can provide them, including demographic data. Using predictive models of interactions between groups with clearly stated goals and intentions will allow commanders to select appropriate COAs. Some of these actions may well be targeted against individuals, or small groups of people, whose arrest would create our desired

levels of disruption.

In the latter case (anarchic) it might be the levels of granularity of intelligence vary and are targeted at different aspects of behavior, such as leaders who cannot be arrested. This option simply does not exist if the ramifications would be too large. For example, what a commander might attempt in an anarchic situation—where there has been significant societal breakdown, and different but mostly equal factions have emerged with their own apparent agendas—would necessarily require a different response. This is about giving a commander the freedom to limit the options of significant and politically influential groups, perhaps through disrupting their supply chains of people, materials and financing. This also has to be set alongside specific political reconciliation attempts, such as overtures towards certain less-than-hardline members of the Taliban in Afghanistan. In this regard the commander has to understand the ‘extra landscape’—where initiatives may be tried—lies outside a sphere of military control.

The difficulty in this latter case is many groups may have no idea what their campaign plan is, nor their medium to long term agenda: they simply have not figured that out yet. Psychologically, they can still operate across a broad spectrum of actions (such as large scale suicide attacks) without the constraints that might exist if their overall goals—such as becoming part of the political mainstream—might impose. A question is: “in an anarchic situation is there any form of regulation that can help a military commander make some decisions as to how to proceed?”

It is interesting to reflect that after the 2005 attacks in Jordan, Abu Mussab Al Zarqawi lost some of his constituency. So it is possible to suggest even people involved in extreme forms of terrorism eventually go too far, and can lose their key supporters. Perhaps some self-regulating mechanism comes into play? However, until his death Al Zarqawi was still attracting large sources of finances—some of that being drawn away from sources that had traditionally supported

the broader Al Qaeda organization. This must have been because, at least in the eyes of his supporters, some degree of support—albeit extreme—existed outside his immediate group.

Summary and Conclusions

This analysis shows that information operations design has to be capable of taking many factors into account. These include a wide range of landscapes in which political, military, socio-cultural, ethno-religious and economic factors. Such factors play a key role if one is to understand the context against which we create an information operation. Message components need to apply at the strategic, operational and tactical levels—and very importantly—merge as one flows from one level to another. Any obvious fault lines or inconsistencies across those levels will be open to enemy exploitation and will form part of their response. Again, we are dealing with a media savvy adversary who is very capable of putting across his own interpretations of our messages.

This does all sound very difficult. It is hard for us to imagine orchestrating a campaign across all those levels with proper consistency and fluidness. After all, this is the very heart of the pragmatism behind politics. The hard problem is that our adversaries have set the benchmark, and at the moment we are not competing with them—because we fear the consequences. Looking at the Islamic community's worldwide reaction to the so-called Danish cartoons shows our effort is fraught with dangers. Sending out the wrong messages could result in all sorts of unforeseen consequences, such those surrounding the execution of Saddam Hussein.

Clearly, it is vital we develop a professional cadre of information operations specialists, with the right social and psychological skills, particularly awareness of the history of some of our more complex theatres. Otherwise, how can we give our commanders options when dealing with the chaotic

and anarchic ends across our spectrum of backdrops? It is also vital that we develop approaches with simple and consistent messages—things are already complex enough, and there may be little gain in trying to make them more complicated. How we carry this out shall be the fourth part of this series.

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